

Amendments to the Specification:

Please replace the paragraph beginning on page 9, lines 24 with the following amended paragraph:

With continued reference to FIG. 11, the total possible vertical space T_s that can be occupied by the substrate 24 is determined by summing the center point thickness of the substrate 24, the substrate thickness tolerance, the thickness variation, the bow or warp amount, the pitch tolerance, the slot 70 angle with respect to the horizontal alignment (i.e., determinable movement of the substrate 24 within the slots 70 of the input cassette 34a, 34b due to the angle of the slots). In a representative example, the T_s is about 1900 microns.

Please replace the abstract at page 19 with the following amended abstract:

A system for handling substrates held in a carrier, ~~the system comprising~~ includes a robot having an articulating robotic arm, a processor for controlling the robotic arm, and an end effector attached to a movable end of the robotic arm~~[[, the]].~~ The end effector comprising includes a blade having a first end, ~~[[and]]~~ a second end, ~~the blade having~~ an active area for sensing a distance between the end effector and the substrate, ~~[[and]]~~ a passive gripper attached to the first end of the blade, and an active gripper attached to the second end of the blade.